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line ?, after "roughened", insert - titanium metal

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✓ Claim 37, line 3, delete "an" and insert -- a uniformly -- ;
after "exterior", insert -- titanium metal

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✓ Claim 47, line 2, delete "an" and insert -- a uniform -- ;
after "exterior", insert -- titanium metal

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REMARKS

Claims 11-50 remain in the application for further prosecution. Claims 11, 17, 22, 27, 37, and 47 have been amended to better define the invention and to distinguish over the reference.

Two terminal disclaimers are enclosed which remove the Applicant's earlier related patents from consideration with regard to the obviousness-type double patenting rejections.

A new declaration has been prepared, to include all the parent applications cited in the previous amendment, and it is enclosed herewith.

The Examiner has requested that certain references cited in the Information Disclosure be submitted for review. Copies of those materials are enclosed for the Examiner's use.

The Examiner has continued to reject the claims based on the Krueger '434 patent, either as anticipated under 35 U.S.C. 102(b) or as obvious under 35 U.S.C. 103(a). The Applicants contend that the Krueger patent is insufficient to teach one skilled in the art the process by which the Applicant's implants can be made, and further that the implant of Krueger could not have the Applicant's surface. The Examiner has placed the burden on the Applicants to show that the surface of Krueger is not the same as theirs. Unfortunately, the Krueger patent does not provide enough information from which distinctions can be made. In fact, it is not possible to determine how Krueger would actually roughen the surface of his implants. He merely states that methods used in the manufacture of electrolytic capacitors would be used and that these involve the use of mineral acids. A search of the patent literature did not locate information relating to electrolytic capacitors from which one could determine the meaning of the Krueger statements. It appears that aluminum is used in capacitors and that etching of that metal is done with hydrochloric acid after first removing the surface oxide with sodium hydroxide solution. While titanium appears also to have been used in capacitors, no information was found regarding methods which may have been intended by Krueger. Had more information been given by Krueger, the Applicants could respond, but without knowing what was being taught by Krueger, it

can only be concluded that Krueger did not appreciate the significance of removing the native oxide first, before applying an acid etch to the titanium metal. As shown in Examples 1 and 2, the acid mixture which provides a substantially uniform roughness on the surface of the titanium metal, is not able to do so in a uniform manner when the step of removing native oxide is omitted.

The independent claims have been amended to emphasize that the native oxide has been removed from the titanium so that uniform acid-etching of the exposed metal surface can be obtained. It should be clear that one cannot, according to the Applicant's teachings, produce a uniformly acid-etched surface having the uniform irregularities without first removing the native oxide. Thus, "substantially lacking native oxide" must be understood to mean that it has been removed, not simply modified as the Examiner has suggested. Otherwise the Applicants have shown that a uniformly acid-etched surface would not be obtained.

Krueger does not mention "native oxide" or any equivalent thereof. He only mentions "surface contamination or impurities" which is not defined, but logically would not include the oxide which forms on the surface of titanium. More likely, the phrase would refer to materials left behind when the implant is machined. Since the Applicants have shown that it is important to remove the native oxide so that the underlying metal surface

can be uniformly acid-etched, all that one skilled in the art would learn from the Krueger patent is that acid-etching to produce a surface having twice the surface area would be desirable.

If as amended the claims are interpreted as requiring both a uniformly acid-etched surface and that the surface contains substantially uniform irregularities, then it is urged that the claims in fact to distinguish the Krueger teachings and should be considered patentable. The Examiner is asked to reconsider and to withdraw his rejections and issue a notice of allowance.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Harold N. Wells", written over a horizontal line.

Harold N. Wells

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